

KEADBY 3 CARBON CAPTURE POWER STATION

A collaboration between **SSE Thermal** and **Equinor**

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The Keadby 3 (Carbon Capture Equipped Gas Fired Generating Station) Order

Land at and in the vicinity of the Keadby Power Station site, Trentside, Keadby, North Lincolnshire

**Statement of Common Ground with
Historic England**

The Planning Act 2008

Applicant: Keadby Generation Limited

Date: December 2021

DOCUMENT HISTORY

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GLOSSARY

Abbreviation	Description
AIL	Additional Abnormal Indivisible Load
AGI	Above ground installation
CCGT	Combined Cycle Gas Turbine
CCP	Carbon dioxide capture plant
DCO	Development Consent Order
EIA	Environmental Impact Assessment
ES	Environmental Statement
HRSG	Heat Recovery Steam Generator
HP	High pressure
MW	megawatts
NLC	North Lincolnshire Council
NSIP	Nationally Significant Infrastructure Project
NTS	Non-technical summary
PCC	Proposed Power and Carbon Capture
PINS	Planning Inspectorate
PEI	Preliminary Environmental Information
SoCG	Statement of Common Ground
SoS	The Secretary of State
ZCH	Zero Carbon Humber

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1.0 INTRODUCTION

1.1 Overview

- 1.1.1 This Statement of Common Ground ('SoCG') with Historic England (**Application Document Ref. 8.5**) has been prepared on behalf of Keadby Generation Limited ('the Applicant') which is a wholly owned subsidiary of SSE plc. It forms part of the application (the 'Application') for a Development Consent Order (a 'DCO'), that has been submitted to the Secretary of State (the 'SoS') for Business, Energy and Industrial Strategy, under Section 37 of 'The Planning Act 2008' (the '2008 Act').
- 1.1.2 The Applicant is seeking development consent for the construction, operation and maintenance of a new low carbon Combined Cycle Gas Turbine (CCGT) Generating Station ('the Proposed Development') on land at, and in the vicinity of, the existing Keadby Power Station, Trentside, Keadby, Scunthorpe DN17 3EF (the 'Proposed Development Site').
- 1.1.3 The Proposed Development is a new electricity generating station of up to 910 megawatts (MW) gross electrical output, equipped with carbon capture and compression plant and fuelled by natural gas, on land to the west of Keadby 1 Power Station and the (under commissioning) Keadby 2 Power Station, including connections for cooling water, electrical, gas and utilities, construction laydown areas and other associated development. It is described in **Chapter 4: The Proposed Development of the Environmental Statement (ES) (ES Volume I – APP-047)**.
- 1.1.4 The Proposed Development falls within the definition of a 'Nationally Significant Infrastructure Project' (NSIP) under Section 14(1)(a) and Sections 15(1) and (2) of the 2008 Act, as it is an onshore generating station in England that would have a generating capacity greater than 50MW electrical output (50MWe). As such, a DCO application is required to authorise the Proposed Development in accordance with Section 31 of the 2008 Act.
- 1.1.5 The DCO, if made by the SoS, would be known as 'The Keadby 3 (Carbon Capture Equipped Gas Fired Generating Station) Order' ('the Order').

1.2 The Proposed Development

- 1.2.1 The Proposed Development will work by capturing carbon dioxide emissions from the gas-fired power station and connecting into the ZCH Partnership export pipeline and gathering network for onward transport to the Endurance saline aquifer under the North Sea.
- 1.2.2 The Proposed Development would comprise a low carbon gas fired power station with a gross electrical output capacity of up to 910MWe and associated buildings, structures and plant and other associated development defined in the

Schedule 1 of the draft DCO (**APP-005**) as Work No. 1 – 11 and shown on the Works Plans (**APP-012**).

1.2.3 At this stage, the final technology selection cannot yet be made as it will be determined by various technical and economic considerations and will be influenced by future UK Government policy and regulation. The design of the Proposed Development therefore incorporates a necessary degree of flexibility to allow for the future selection of the preferred technology in the light of prevailing policy, regulatory and market conditions once a DCO is made.

1.2.4 The Proposed Development will include:

- a carbon capture equipped electricity generating station including a CCGT plant (**Work No. 1A**) with integrated cooling infrastructure (**Work No. 1B**), and carbon dioxide capture plant (CCP) including conditioning and compression equipment, carbon dioxide absorption unit(s) and stack(s) (**Work No. 1C**), natural gas receiving facility (**Work No. 1D**), supporting uses including control room, workshops, stores, raw and demineralised water tanks and permanent laydown area (**Work No. 1E**), and associated utilities, various pipework, water treatment plant, wastewater treatment, firefighting equipment, emergency diesel generator, gatehouse, chemical storage facilities, other minor infrastructure and auxiliaries/ services (all located in the area referred to as the 'Proposed Power and Carbon Capture (PCC) Site' and which together form **Work No. 1**);
- natural gas pipeline from the existing National Grid Gas high pressure (HP) gas pipeline within the Proposed Development Site to supply the Proposed PCC Site including an above ground installation (AGI) for National Grid Gas's apparatus (**Work No. 2A**) and the Applicant's apparatus (**Work No. 2B**) (the 'Gas Connection Corridor');
- electrical connection works to and from the existing National Grid 400kV Substation for the export of electricity (**Work No. 3A**) (the 'Electrical Connection Area to National Grid 400kV Substation');
- electrical connection works to and from the existing Northern Powergrid 132kV Substation for the supply of electricity at up to 132kV to the Proposed PCC Site, and associated plant and equipment (**Work No. 3B**) (the 'Potential Electrical Connection to Northern Powergrid 132kV Substation');
- Water Connection Corridors to provide cooling and make-up water including:
 - underground and/ or overground water supply pipeline(s) and intake structures within the Stainforth and Keadby Canal, including temporary cofferdam (**Work No. 4A**) (the 'Canal Water Abstraction Option');
 - in the event that the canal abstraction option is not available, works to the existing Keadby 1 power station cooling water supply pipelines and intake structures within the River Trent, including temporary cofferdam (**Work No. 4B**) (the 'River Water Abstraction Option');

- works to and use of an existing outfall and associated pipework for the discharge of return cooling water and treated wastewater to the River Trent (**Work No. 5**) (the 'Water Discharge Corridor');
 - towns water connection pipeline from existing water supply within the Keadby Power Station for potable water (**Work No. 6**);
 - above ground carbon dioxide compression and export infrastructure comprising an above ground installation (AGI) for the undertaker's apparatus including deoxygenation, dehydration, staged compression facilities, outlet metering, and electrical connection (**Work No. 7A**) and an above ground installation (AGI) for National Grid Carbon's apparatus (**Work No. 7B**);
 - new permanent access from A18, comprising the maintenance and improvement of an existing private access road from the junction with the A18 including the western private bridge crossing of the Hatfield Waste Drain (**Work No. 8A**) and installation of a layby and gatehouse (**Work No. 8B**), and an emergency vehicle and pedestrian access road comprising the maintenance and improvement of an existing private track running between the Proposed PCC Site and Chapel Lane, Keadby and including new private bridge (**Work No. 8C**);
 - temporary construction and laydown areas including contractor facilities and parking (**Work No. 9A**), and access to these using the existing private roads from the A18 and the existing private bridge crossings, including the replacement of the western existing private bridge crossing known as 'Mabey Bridge' over Hatfield Waste Drain (**Work No. 9B**) and a temporary construction laydown area associated with that bridge replacement (**Work No. 9C**);
 - temporary retention, improvement and subsequent removal of an existing Additional Abnormal Indivisible Load Haulage Route (**Work No. 10A**) and temporary use, maintenance, and placement of mobile crane(s) at the existing Railway Wharf jetty for a Waterborne Transport Offloading Area (**Work No. 10B**);
 - landscaping and biodiversity enhancement measures (**Work No. 11A**) and security fencing and boundary treatments (**Work No. 11B**); and
 - minor associated development.
- 1.2.5 The Proposed Development includes the equipment required for the capture and compression of carbon dioxide emissions from the generating station so that it is capable of being transported off-site. ZCH Partnership will be responsible for the construction, operation and decommissioning of the carbon dioxide gathering network linking onshore power and industrial facilities including the Proposed Development in the Humber Region. The carbon dioxide export pipeline does not, therefore, form part of the Proposed Development and is not included in the Application but will be the subject of

separate consent applications by third parties, such as the Humber Low Carbon Pipeline DCO Project by National Grid Ventures.

- 1.2.6 The Proposed Development is designed to be capable of operating 24 hours per day, 7 days a week, with plant operation dispatchable to meet electricity demand and with programmed offline periods for maintenance. It is anticipated that in the event of CCP maintenance outages, for example, it could be necessary to operate the Proposed Development without carbon capture, with exhaust gases from the CCGT being routed via the Heat Recovery Steam Generator (HRSG) stack.
- 1.2.7 Various types of associated and ancillary development further required in connection with and subsidiary to the above works are detailed in Schedule 1 'Authorised Development' of the draft DCO (**APP-005**). This along with **Chapter 4: The Proposed Development in the ES Volume I (APP-047)** provides further description of the Proposed Development. The areas within which each numbered Work (component) of the Proposed Development are to be built are defined by the coloured and hatched areas on the Works Plans (**APP-012**).

1.3 The Proposed Development Site

- 1.3.1 The Proposed Development Site (the 'Order Limits') is located within and near to the existing Keadby Power Station site near Scunthorpe, Lincolnshire and lies within the administrative boundary of North Lincolnshire Council (NLC). The majority of land is within the ownership or control of the Applicant (or SSE associated companies) and is centred on national grid reference 482351, 411796.
- 1.3.2 The existing Keadby Power Station site currently encompasses the operational Keadby 1 and (under construction) Keadby 2 Power Station (under commissioning) sites, including the Keadby 2 Power Station Carbon Capture and Readiness reserve space.
- 1.3.3 The Proposed Development Site encompasses an area of approximately 69.4 hectares (ha). This includes an area of approximately 18.7ha to the west of Keadby 2 Power Station in which the generating station (CCGT plant, cooling infrastructure and CCP) and gas connection will be developed (the Proposed PCC Site).
- 1.3.4 The Proposed Development Site includes other areas including:
- a high pressure gas pipeline to supply the CCGT including a gas compound for National Grid Gas's (NGG) apparatus and a gas compound for the Applicant's apparatus;
 - the National Grid 400kV Substation located directly adjacent to the Proposed PCC Site, through which electricity generated by the Proposed Development will be exported;

- Emergency Vehicle Access Road and Potential Electrical Connection to Northern Powergrid Substation;
- Water Connection Corridors:
 - Canal Water Abstraction Option which includes land within the existing Keadby Power Station site with an intake adjacent to the Keadby 2 Power Station intake and pumping station and interconnecting pipework;
 - River Water Abstraction Option which includes a corridor that spans Trent Road and encompasses the existing Keadby Power Station pumping station, below ground cooling water pipework, and infrastructure within the River Trent; and
 - a Water Discharge Corridor which includes an existing discharge pipeline and outfall to the River Trent and follows a route of an existing easement for Keadby 1 Power Station;
- an existing river wharf at Railway Wharf (the Waterborne Transport Offloading Area) and existing temporary haul road into the into the existing Keadby 1 Power Station Site (the 'Additional Abnormal Indivisible Load (AIL) Route');
- a number of temporary Construction Laydown Areas on previously developed land and adjoining agricultural land; and
- land at the A18 Junction and an existing site access road, including two existing private bridge crossing of the Hatfield Waste Drain lying west of Piffrey Farm (the western of which is known as Mabey Bridge, to be replaced, and the eastern of which is termed Skew Bridge) and an existing temporary gatehouse, to be replaced in permanent form.

1.3.5 In the vicinity of the Proposed Development Site the River Trent is tidal. Therefore, parts of the Proposed Development Site are within the UK marine area. No harbour works are proposed.

1.3.6 Further description of the Proposed Development Site and its surroundings is provided in **Chapter 3: The Site and Surrounding Area** in ES Volume I (**APP-046**).

1.4 The Development Consent Process

1.4.1 As a NSIP project, the Applicant is required to seek a DCO to construct, operate and maintain the generating station, under Section 31 of the 2008 Act. Sections 42 to 48 of the 2008 Act govern the consultation that the promoter must carry out before submitting an application for a DCO and Section 37 of the 2008 Act governs the form, content and accompanying documents that are required as part of a DCO application.

1.4.2 An application for development consent for the Proposed Development has been submitted to and accepted for examination by the Planning Inspectorate

(PINS) acting on behalf of the Secretary of State. PINS is now examining the Application and will make a recommendation to the Secretary of State, who will then decide whether to make (grant) the DCO.

1.5 The Purpose and Structure of this Document

1.5.1 The purpose of this document is to summarise clearly the agreements reached between the Applicant and Historic England ('the Parties') on matters relevant to the examination of the Application and to assist the Examining Authority. It has been prepared with regard to the guidance in 'Planning Act 2008: examination of application for development consent' (Department for Communities and Local Government, March 2015).

1.5.2 This version of the document summarises the agreements reached between the Parties regarding matters listed below:

- The effect on heritage assets including any scheduled ancient monuments; and
- Any archaeological effects from construction of the Proposed Development.

1.6 Status of this version

1.6.1 This is the first draft of this SoCG.

1.6.2 The document is structured as follows:

- Section 2 – summarises the role of Historic England;
- Section 3 – sets out details of consultation with Historic England to date;
- Section 4 – sets out the matters agreed between the parties in respect of the Application; and
- Section 5 – sets out any matters that are yet to be agreed and where discussions are on-going between the parties and summarises next steps.

2.0 THE ROLE OF HISTORIC ENGLAND

2.1 Overview

- 2.1.1 Historic England is an executive non-departmental public body responsible for protecting the historical environment of England by preserving and listing historic buildings, ancient monuments and advising central and local government.
- 2.1.2 Historic England is the government's expert advisor on England's heritage and has a statutory role in the planning system. Historic England is responsible for giving advice to local planning authorities, government departments, developers and owners on development proposals affecting the historic environment.
- 2.1.3 Historic England is a consultee under sections 42 and 56 of the 2008 Act, meaning applicants must consult with Historic England before submitting a DCO application and once an application has been accepted for examination.

3.0 SUMMARY OF CONSULTATION

3.1 Overview

3.1.1 Consultation and technical engagement has been ongoing with Historic England since the scoping stage for the Proposed Development (June 2020). Consultation comments received from Historic England for the Proposed Development are presented in Table 3.1 below.

Table 3.1: Consultation Summary

Date	Details
<p>June 2020 (consultation on EIA Scoping)</p>	<p>Historic England were consulted by NLC in respect of a request made by the Applicant for an EIA Scoping Opinion for the Proposed Development.</p> <p>Response by Historic England on 25 June 2020 provided advice on visual (fixed point and kinetic) impacts of the on the Scheduled and listed Keadby Lock and associated waterways and the need to assess archaeological potential of the Proposed Development Site.</p>
<p>January 2021 (technical engagement through video conference)</p>	<p>A meeting took place on 6 January 2021 to discuss the Proposed Development and the approach to the EIA.</p> <p>Historic England confirmed that they were satisfied with the scope, extent and assessment criteria used in determining the impact of the Proposed Development on the significance and setting of the listed buildings and conservation areas presented within the Preliminary Environmental Information (PEI) Report.</p> <p>Historic England confirmed that they would defer to NLC in response to significance and setting of the Isle of Axholme Area of Special Historic Landscape Interest asset.</p>

Date	Details
	<p>Historic England noted the potential geoarchaeological significance of the Proposed Development Site and welcomed the inclusion of pre-determination investigation of the potential peat deposits, offering assistance of their Regional Science Advisor in determining the scope of those investigations.</p> <p>Historic England confirmed that they would defer to NLC with regards to agreeing the scope and monitoring of such works.</p>
<p>January 2021 (formal Stage 2 Consultation/response)</p>	<p>Historic England was consulted as part of the statutory consultation process. Historic England responded to the statutory consultation period, providing comments on the PEI Report which confirmed that they were in general agreement with the conclusions of the PEI Report and its Non-Technical Summary (NTS) that the development will have a negligible impact on designated heritage assets. A copy of Historic England's response is provided in Appendix 1.</p>
<p>February 2021</p>	<p>The Applicant contacted Historic England Science Advisor to seek comment on the methodology of the hand auger survey proposed as part of a Written Scheme of Investigation (WSI) to evaluate the archaeological potential of the Proposed Development Site, including any research that the auger survey could contribute to. Historic England did not provide a response.</p>
<p>July/ August 2021</p>	<p>The Applicant wrote to Historic England to discuss the Application, any queries arising following review of the draft DCO</p>

Date	Details
	and Application documents, the examination process and the preparation of a SoCG. Historic England confirmed that they would be willing to produce a SoCG with the Applicant to agree where the material submitted for examination has addressed the scope of matters highlighted in Historic England’s advice.
August 2021	Historic England Science Advisor contacted the Applicant to confirm it had missed the opportunity provided by the Applicant (February 2021) to comment on the scope of pre-submission archaeological investigations but was content that the methodology and findings were robust.
Historic England Relevant Representation dated 02 September 2021 (RR-003)	Historic England’s Relevant Representation confirmed that the Parties are working towards a SoCG. It is also confirmed that Historic England does not object to the grant of DCO.

4.0 MATTERS AGREED

4.1.1 The below Table 4.1 contains a list of ‘matters agreed’ along with a concise commentary of what the item refers to and how it came to be agreed between the two parties.

Table 4.2: List of Matters Agreed between the Applicant and Historic England

Matter Agreed	Commentary
Consultation	A summary of pre-application consultation is contained in the Consultation Report (APP-030) and Chapter 15: Cultural Heritage of ES Volume I (APP-058) and in Section 3 of this SoCG. It is agreed that the consultation summary in Section 3 of this SoCG provides an accurate record of consultation with Historic England on application matters to date.
Archaeology	It is agreed that Historic England has deferred matters relating to on-site archaeology to North Lincolnshire Council Historic Environment Officer.
Effects on built heritage assets (including any scheduled monuments).	<p>The assessment of the effects of the Proposed Development in relation to built heritage assets is set out in Appendix 15A: Cultural Heritage Desk Based Assessment (APP-093) (ES Volume II), Chapter 15: Cultural Heritage (ES Volume I) (APP-058) and Figures 15.1 – 15.3 (ES Volume III) (APP-155 – APP157).</p> <p>The Parties agree that the approach taken by the Applicant to assess the effects of the Proposed Development on built heritage, including (including designated and non-designated assets) is appropriate (including methodology, data collection methods, baseline data, approach to assessment and analysis).</p> <p>The Parties agree that appropriate consideration has been given to all scheduled monuments within the Study Area, in Chapter 15: Cultural Heritage (APP-058). It is agreed that no further specific mitigation beyond the design and impact avoidance measures set out in Chapter 15: Cultural Heritage is required.</p>

Matter Agreed	Commentary
Draft DCO	No changes are sought by Historic England in relation to the draft DCO (APP-005).

5.0 MATTERS NOT AGREED AND NEXT STEPS

5.1.1 This SoCG sets out the agreements that have been reached between the Parties to date in respect of the matters relating to the Proposed Development requested by the ExA outlined in Section 1.7 of this SoCG.

5.1.2 The Parties confirm that there are no outstanding matters to be agreed.

Signed



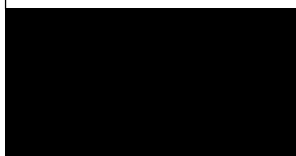
Tim Allen

Team Leader (Development Advice)

On behalf of Historic England

Date: 16 December 2021

Signed



Richard Lowe, Director, AECOM Ltd

Signed On behalf of Keadby Generation Ltd

Date: 16 December 2021

APPENDIX 1 – CONSULTATION COMMENTS

Ms Ellie Mcgrath

Direct Dial: [REDACTED]

DWD LLP

6 New Bridge Street

Our ref: PL00728002

London

EC4V 6AB

20 January 2021

Dear Ms Mcgrath

THE KEADBY 3 LOW CARBON GAS POWER STATION PROJECT - LAND AT AND IN THE VICINITY OF THE EXISTING KEADBY POWER STATIONS (KEADBY 1 AND KEADBY 2), KEADBY, NEAR SCUNTHORPE, NORTH LINCOLNSHIRE

STAGE 2 CONSULTATION IN ACCORDANCE WITH SECTION 42 'DUTY TO CONSULT' OF THE PLANNING ACT 2008 & REGULATION 13 'PRE-APPLICATION PUBLICITY UNDER SECTION 48 (DUTY TO PUBLICISE)' OF THE INFRASTRUCTURE PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2017

Thank you for consulting Historic England on the Keadby 3 Low Carbon Gas Power Station Project and for the subsequent video-conference of Wednesday 6th January which explained the project in more detail.

Historic England generally agrees with the conclusions of the Preliminary Environmental Information Report (PEIR) and the Non-Technical Summary (NTS), that the development will have a negligible impact on designated heritage assets. Once into the operational and decommissioning phase there may be an opportunity to improve the immediate environs and setting of the Scheduled and Gd II Listed Keadby Lock (National Heritage List for England UID: 1005204 & 1342734). This could be achieved by the removal of some of the infrastructure around the Lock which relates to the Power Station.

In our EIA Scoping report comments (03 June 2020, Tim Allen) we highlighted concerns that all intrusive site investigation as regards archaeology were likely to be undertaken post-consent. We are pleased to see that these are now being undertaken pre-determination so that a clear understanding of the archaeological potential of the development can be addressd in a manner proportionate to their significance, as required by national policy (NPPF 189 and 193). As undesignated heritage assets you should seek the North Lincolnshire Council's archaeological specialist advisor on this matter and implement it in full.

Yours sincerely,

[REDACTED]

Alison MacDonald
Assistant Inspector of Ancient Monuments

[REDACTED]

Susan Evans BSc (Hons), MSc, CEnv, IEMA Principal EIA Practitioner

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